

Cheng-Bin Shi

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

87

papers

1,378

citations

21

h-index

33

g-index

92

ext. papers

1,701

ext. citations

1.9

avg, IF

5.13

L-index

#	Paper	IF	Citations
87	Effect of Solution Treatment on Grain Growth and Precipitates in Electroslag Remelted 15Cr-22Ni Iron-Base Superalloy. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2022 , 53, 877	2.5	0
86	Non-metallic inclusions in electroslag remelting: a review. <i>Journal of Iron and Steel Research International</i> , 2021 , 28, 1483	1.2	2
85	Hot deformation characteristics and microstructure evolution of electroslag remelted 15Cr-22Ni-1Nb austenitic heat-resistant steel. <i>Materials Characterization</i> , 2021 , 182, 111564	3.9	2
84	Investigation on Desulfurization of Rejected Electrolytic Manganese Metal Scrap: Experiment and Mathematical Modeling. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2021 , 52, 1626-1639	2.5	2
83	Growth and agglomeration behaviors of eutectic M7C3 carbide in electroslag remelted martensitic stainless steel. <i>Journal of Materials Research and Technology</i> , 2021 , 11, 1490-1505	5.5	9
82	Evolution of Inclusions with Ce Addition and Ca Treatment in Al-killed Steel during RH Refining Process. <i>ISIJ International</i> , 2021 , 61, 1506-1513	1.7	5
81	Dephosphorization of high silicon hot metal based on double slag converter steelmaking technology. <i>Ironmaking and Steelmaking</i> , 2021 , 48, 447-456	1.3	3
80	Effect of Nitrogen on the Carbide in Steel. <i>Engineering Materials</i> , 2021 , 307-326	0.4	
79	Carbides Control in Electroslag Remelting Process. <i>Engineering Materials</i> , 2021 , 59-108	0.4	
78	Effect of Magnesium on the Carbide in H13 Steel. <i>Engineering Materials</i> , 2021 , 205-282	0.4	
77	Review on desulfurization in electroslag remelting. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2021 , 28, 18-29	3.1	12
76	Carbide Control in Rolling Process. <i>Engineering Materials</i> , 2021 , 109-142	0.4	
75	Effect of Ce on inclusion evolution and HAZ mechanical properties of Al-killed high-strength steel. <i>Ironmaking and Steelmaking</i> , 2021 , 48, 796-802	1.3	3
74	Effect of Heat Treatment on the Carbide in Steel. <i>Engineering Materials</i> , 2021 , 143-203	0.4	0
73	Carbides in Special Steel. <i>Engineering Materials</i> , 2021 , 1-57	0.4	0
72	Numerical analysis of role of melting rate on electroslag remelting continuous directional solidification of a die steel. <i>Journal of Iron and Steel Research International</i> , 2021 , 28, 1617-1624	1.2	0
71	Evolution of Calcium Aluminate Inclusions by Cerium Treatment in Al-Killed Steel during Ruhrstahl-Peraeus Refining Process. <i>Steel Research International</i> , 2020 , 91, 2000117	1.6	4

70	Effect of Melting Rate of Electroslag Rapid Remelting on the Microstructure and Carbides in a Hot Work Tool Steel. <i>Metals and Materials International</i> , 2020 , 27, 3603	2.4	3
69	Development of Low-fluoride Slag for Electroslag Remelting: Role of Li ₂ O on the Crystallization and Evaporation of the Slag. <i>ISIJ International</i> , 2020 , 60, 840-847	1.7	7
68	Evolution of TiN and Oxide Inclusions in Ti-containing Fe-25Ni-15Cr Alloy during Electroslag Remelting. <i>ISIJ International</i> , 2020 , 60, 1577-1585	1.7	9
67	Deoxidation of Electroslag Remelting (ESR) [A Review]. <i>ISIJ International</i> , 2020 , 60, 1083-1096	1.7	19
66	Crystallization Kinetics and Structure of CaF ₂ -CaO-Al ₂ O ₃ -MgO-TiO ₂ Slag for Electroslag Remelting. <i>ISIJ International</i> , 2020 , 60, 492-498	1.7	1
65	Supergravity-Induced Separation of Oxide and Nitride Inclusions from Inconel 718 Superalloy Melt. <i>ISIJ International</i> , 2020 , 60, 205-211	1.7	5
64	Effect of SiO ₂ substitution with Al ₂ O ₃ during high-Al TRIP steel casting on crystallization and structure of low-basicity CaO-SiO ₂ -based mold flux. <i>Journal of Iron and Steel Research International</i> , 2020 , 27, 33-41	1.2	8
63	Precipitation and growth of MnS inclusion in an austenitic hot-work die steel during ESR solidification process. <i>Metallurgical Research and Technology</i> , 2019 , 116, 322	0.9	4
62	Evolution of carbides and performance of knives made of aged 8Cr13MoV steel. <i>Materials Science and Technology</i> , 2019 , 35, 1988-1996	1.5	0
61	Precipitation Mechanism and Reduction of Amount of Primary Carbides During Electroslag Remelting of 8Cr13MoV Stainless Steel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019 , 50, 1365-1377	2.5	12
60	Crystallization Characteristics and In-Mold Performance of Electroslag Remelting-Type TiO ₂ -Bearing Slag. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019 , 50, 1148-1160	2.5	10
59	Evolution of Oxide Inclusions in Si-Mn-Killed Steel During Protective Atmosphere Electroslag Remelting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019 , 50, 1139-1147	2.5	21
58	Formation and Evolution of Non-Metallic Inclusions in Calcium Treatment H13 Steel during Electroslag Remelting Process. <i>ISIJ International</i> , 2019 , 59, 828-838	1.7	15
57	The Effect of Al-Mg Deoxidation on the Cleanliness of Steel during the Electroslag Remelting Process. <i>Steel Research International</i> , 2019 , 90, 1900185	1.6	4
56	Effect of Primary Carbides on the Sharpness of Kitchen Knives Made of 8Cr13MoV Steel. <i>Journal of Materials Engineering and Performance</i> , 2019 , 28, 4511-4521	1.6	5
55	Continuous Cooling Transformation of Undeformed and Deformed High Strength Crack-Arrest Steel Plates for Large Container Ships. <i>High Temperature Materials and Processes</i> , 2019 , 38, 183-191	0.9	1
54	Effect of TiO ₂ on the crystallisation behaviour of CaF ₂ -CaO-Al ₂ O ₃ -MgO slag for electroslag remelting of Ti-containing tool steel. <i>Ironmaking and Steelmaking</i> , 2018 , 45, 135-144	1.3	9
53	Evolution of CaO-MgO-Al ₂ O ₃ -CaS(SiO ₂) inclusions in H13 die steel during electroslag remelting process. <i>Ironmaking and Steelmaking</i> , 2018 , 45, 6-16	1.3	12

52	Effects of Reoxidation of Liquid Steel and Slag Composition on the Chemistry Evolution of Inclusions During Electroslag Remelting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018 , 49, 1675-1689	2.5	18
51	Effect of Directional Solidification in Electroslag Remelting on the Microstructure and Cleanliness of an Austenitic Hot-work Die Steel. <i>ISIJ International</i> , 2018 , 58, 1275-1284	1.7	14
50	Evolution of Oxide-Sulfide Complex Inclusions and Its Correlation with Steel Cleanliness During Electroslag Rapid Remelting (ESRR) of Tool Steel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018 , 49, 3390-3402	2.5	17
49	Effect of Mg addition on carbides in H13 steel during electroslag remelting process. <i>Metallurgical Research and Technology</i> , 2018 , 115, 501	0.9	5
48	Characterization on Microstructure and Carbides in an Austenitic Hot-work Die Steel during ESR Solidification Process. <i>ISIJ International</i> , 2018 , 58, 2079-2087	1.7	6
47	Evolution of Al ₂ O ₃ inclusions by magnesium treatment in H13 hot work die steel. <i>Ironmaking and Steelmaking</i> , 2017 , 44, 128-133	1.3	27
46	Effect of TiO ₂ on the viscosity and structure of low-fluoride slag used for electroslag remelting of Ti-containing steels. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2017 , 24, 18-24	3.1	22
45	Effect of Spheroidizing Annealing on Microstructure and Mechanical Properties of High-Carbon Martensitic Stainless Steel 8Cr13MoV. <i>Journal of Materials Engineering and Performance</i> , 2017 , 26, 478-487	1.6	10
44	Effect of directional solidification of electroslag remelting on the microstructure and primary carbides in an austenitic hot-work die steel. <i>Journal of Materials Processing Technology</i> , 2017 , 249, 32-38	5.3	20
43	Evolution of Carbides in H13 Steel in Heat Treatment Process. <i>Materials Transactions</i> , 2017 , 58, 152-156	1.3	11
42	Effect of Heat Treatment on the Microstructure and Mechanical Properties of Nitrogen-Alloyed High-Mn Austenitic Hot Work Die Steel. <i>Metals</i> , 2017 , 7, 94	2.3	7
41	Simultaneous Modification of Alumina and MgO-Al ₂ O ₃ Inclusions by Calcium Treatment During Electroslag Remelting of Stainless Tool Steel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017 , 48, 146-161	2.5	30
40	Effect of Magnesium Addition on Behavior of Collision and Agglomeration between Solid Inclusion Particles on H13 Steel Melts. <i>Steel Research International</i> , 2017 , 88, 1600185	1.6	21
39	Precipitation behavior of carbides in high-carbon martensitic stainless steel. <i>International Journal of Materials Research</i> , 2017 , 108, 20-28	0.5	10
38	Numerical simulation of Electroslag Remelting of Cr5 cold roll steel under different process parameters. <i>Metallurgical Research and Technology</i> , 2017 , 114, 614	0.9	1
37	Effect of trace magnesium on carbide improvement in H13 steel. <i>Canadian Metallurgical Quarterly</i> , 2016 , 55, 321-327	0.9	20
36	Effect of Oxide Inclusions Modification During Electroslag Remelting on Primary Carbides and Toughness of a High-Carbon 17 mass% Cr Tool Steel. <i>Journal of Materials Engineering and Performance</i> , 2016 , 25, 4785-4795	1.6	14
35	Effect of Electroslag Remelting Parameters on Primary Carbides in Stainless Steel 8Cr13MoV. <i>Materials Transactions</i> , 2016 , 57, 1547-1551	1.3	8

34	Fluoride evaporation and crystallization behavior of CaF ₂ -CaO-Al ₂ O ₃ -(TiO ₂) slag for electroslag remelting of Ti-containing steels. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2016 , 23, 627-636	3.1	21
33	Dependence of Temperature and Slag Composition on Dephosphorization at the First Deslagging in BOF Steelmaking Process. <i>High Temperature Materials and Processes</i> , 2016 , 35, 433-440	0.9	9
32	Effect of Titanium on the Microstructure and Mechanical Properties of High-Carbon Martensitic Stainless Steel 8Cr13MoV. <i>Metals</i> , 2016 , 6, 193	2.3	11
31	Effect of Boron on the Hot Ductility of Low-Carbon Nb-Ti-Microalloyed Steel. <i>Materials Transactions</i> , 2016 , 57, 647-653	1.3	4
30	Development of Low-Fluoride Slag for Electroslag Remelting: Role of Li ₂ O on the Viscosity and Structure of the Slag. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016 , 47, 3343-3349	2.5	13
29	Control of Crystal Morphology for Mold Flux During High-Aluminum AHSS Continuous Casting Process. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016 , 47, 2211-2221	2.5	14
28	Effect of Micro-alloying Element Boron on the Strengthening of High-Strength Steel Q690D. <i>Metallography, Microstructure, and Analysis</i> , 2015 , 4, 102-108	1.1	7
27	Effect of Boron and Titanium Addition on the Hot Ductility of Low-Carbon Nb-Containing Steel. <i>High Temperature Materials and Processes</i> , 2015 , 34,	0.9	1
26	Non-isothermal melt crystallization of cuspidine in CaO-SiO ₂ -CaF ₂ based glasses. <i>Journal of Non-Crystalline Solids</i> , 2015 , 412, 58-65	3.9	23
25	Effect of Quenching Process on the Microstructure and Hardness of High-Carbon Martensitic Stainless Steel. <i>Journal of Materials Engineering and Performance</i> , 2015 , 24, 4313-4321	1.6	14
24	Kinetics of Isothermal Melt Crystallization in CaO-SiO ₂ -CaF ₂ -Based Mold Fluxes. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2015 , 46, 2374-2383	2.5	21
23	Crystallization Kinetics and Mechanism of CaO-Al ₂ O ₃ -Based Mold Flux for Casting High-Aluminum TRIP Steels. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2015 , 46, 345-356	2.5	24
22	Influence of Boron Addition on the Hot Ductility of Low-Carbon Aluminum-Killed Steel. <i>Materials Transactions</i> , 2015 , 56, 1133-1139	1.3	4
21	Effect of electroslag remelting on carbides in 8Cr13MoV martensitic stainless steel. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2015 , 22, 1149-1156	3.1	15
20	Effect of SiO ₂ on the Crystallization Behaviors and In-Mold Performance of CaF ₂ -CaO-Al ₂ O ₃ Slags for Drawing-Ingots-Type Electroslag Remelting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2015 , 46, 2110-2120	2.5	34
19	Crystallization Characteristics of CaO-Al ₂ O ₃ -Based Mold Flux and Their Effects on In-Mold Performance during High-Aluminum TRIP Steels Continuous Casting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014 , 45, 1081-1097	2.5	73
18	Crystallization Behaviors of CaO-SiO ₂ -Al ₂ O ₃ -Na ₂ O-CaF ₂ -(Li ₂ O-B ₂ O ₃) Mold Fluxes. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014 , 45, 1874-1886	2.5	49
17	Evaluation of Matusita Equation and Its Modified Expression for Determining Activation Energy Associated with Melt Crystallization. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014 , 45, 1987-1991	2.5	4

16	Effect of magnesium addition on inclusions in H13 die steel. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2014 , 21, 1062-1067	3.1	14
15	Control of MgO-Al ₂ O ₃ Spinel Inclusions during Protective Gas Electroslag Remelting of Die Steel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2013 , 44, 378-389	2.5	41
14	Theory Analysis of Steel Cleanliness Control During Electroslag Remelting 2013 , 31-38		
13	Theory Analysis of Steel Cleanliness Control During Electroslag Remelting 2013 , 31-38		
12	Investigation of Oxide Inclusions and Primary Carbonitrides in Inconel 718 Superalloy Refined through Electroslag Remelting Process. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2012 , 43, 1596-1607	2.5	51
11	Assessment of Oxygen Control and Its Effect on Inclusion Characteristics during Electroslag Remelting of Die Steel. <i>Steel Research International</i> , 2012 , 83, 472-486	1.6	72
10	A Thermodynamic Model for Prediction of Iron Oxide Activity in Some FeO-Containing Slag Systems. <i>Steel Research International</i> , 2012 , 83, 244-258	1.6	48
9	A Sulfide Capacity Prediction Model of CaO-SiO ₂ -MgO-FeO-MnO-Al ₂ O ₃ Slags during the LF Refining Process Based on the Ion and Molecule Coexistence Theory. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2012 , 43, 241-266	2.5	28
8	Characteristics of inclusions in high-Al steel during electroslag remelting process. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2012 , 19, 295-302	3.1	23
7	A Thermodynamic Model of Phosphorus Distribution Ratio between CaO-SiO ₂ -MgO-FeO-Fe ₂ O ₃ -MnO-Al ₂ O ₃ -P ₂ O ₅ Slags and Molten Steel during a TopBottom Combined Blown Converter Steelmaking Process Based on the Ion and Molecule Coexistence Theory. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2011 , 42, 251-277	2.5	70
6	A Thermodynamic Model of Phosphate Capacity for CaO-SiO ₂ -MgO-FeO-Fe ₂ O ₃ -MnO-Al ₂ O ₃ -P ₂ O ₅ Slags Equilibrated with Molten Steel during a TopBottom Combined Blown Converter Steelmaking Process Based on the Ion and Molecule Coexistence Theory. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2011 , 42, 251-277	2.5	52
5	A Thermodynamic Model of Sulfur Distribution Ratio between CaO-SiO ₂ -MgO-FeO-MnO-Al ₂ O ₃ Slags and Molten Steel during LF Refining Process Based on the Ion and Molecule Coexistence Theory. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2011 , 42, 1150-1180	2.5	61
4	A Sulphide Capacity Prediction Model of CaO-SiO ₂ -MgO-Al ₂ O ₃ Ironmaking Slags Based on the Ion and Molecule Coexistence Theory. <i>ISIJ International</i> , 2010 , 50, 1362-1372	1.7	64
3	A Thermodynamic Model for Calculating Sulphur Distribution Ratio between CaO-SiO ₂ -MgO-Al ₂ O ₃ Ironmaking Slags and Carbon Saturated Hot Metal Based on the Ion and Molecule Coexistence Theory. <i>ISIJ International</i> , 2009 , 49, 1828-1837	1.7	61
2	Influence of cerium treatment on inclusion modification and as-cast microstructure of high-strength low-alloy steel. <i>Journal of Iron and Steel Research International</i> , 1	1.2	1
1	Effect of SiO ₂ and B ₂ O ₃ on crystallization and structure of CaF ₂ -CaO-Al ₂ O ₃ -based slag for electroslag remelting of ultra-supercritical rotor steel. <i>Journal of Iron and Steel Research International</i> , 1	1.2	1